

Title (en)
A METHOD OF MONITORING ELECTRICAL LOADS, CORRESPONDING CIRCUIT, AMPLIFIER AND AUDIO SYSTEM

Title (de)
VERFAHREN ZUR ÜBERWACHUNG ELEKTRISCHER LASTEN, ENTSPRECHENDE SCHALTUNG, VERSTÄRKER UND AUDIOSYSTEM

Title (fr)
PROCÉDÉ DE SURVEILLANCE DE CHARGES ÉLECTRIQUES, CIRCUIT CORRESPONDANT, AMPLIFICATEUR AUDIO ET SYSTÈME AUDIO

Publication
EP 3792640 B1 20211201 (EN)

Application
EP 20191476 A 20200818

Priority
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Abstract (en)
[origin: EP3792640A1] Admittance of an electrical load such as a loudspeaker in an automotive audio system is calculated by:- generating (10) a first voltage signal ($\sin(2\pi f_{in}/kT)$) and a second voltage signal ($\cos(2\pi f_{in}/kT)$) in quadrature to the first voltage signal,- injecting one ($\sin(2\pi f_{in}/kT)$) of these voltage signals into a signal propagation path towards the electrical load,- sensing (CS) a current signal (i_k) flowing through the electrical load as a result of the voltage signal ($\sin(2\pi f_{in}/kT)$) injected into the signal propagation path towards the electrical load,- processing (101 to 108) the first ($\sin(2\pi f_{in}/kT)$) and second ($\cos(2\pi f_{in}/kT)$) voltage signals and the current signal (i_k) sensed (CS) by executing an approximation procedure (LMS, for instance) of the current signal (i_k) sensed (CS) via a linear combination of the first ($\sin(2\pi f_{in}/kT)$) and second ($\cos(2\pi f_{in}/kT)$) voltage signals via a first (a) and a second (b) linear combination coefficient. The approximation procedure comprises updating (a', a"; b', b") the first (a) and second (b) linear combination coefficients until a target approximation (108) is reached. An admittance of the electrical load is calculated as a function the updated values of the first (a) and second (b) linear combination coefficients when the target approximation is reached (108).

IPC 8 full level
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CPC (source: CN EP US)
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